

CLAIMS

What is claimed is:

1. A method for migrating file locks from one server to another comprising:
receiving a file lock indicator from a primary server;
5 recording the file lock indicator; and
conveying the file lock indicator to an adoptive server when the primary server is
unavailable.
2. The method of Claim 1 wherein receiving a file lock indicator comprises:
monitoring a file lock data-store on a primary server; and
10 retrieving a client file lock indicator from the file lock data-store when a new client
file lock indicator is detected in the file lock data-store.
3. The method of Claim 2 wherein monitoring a file lock data-store comprises monitoring a
network file system status monitor directory.
4. The method of Claim 1 wherein recording the file lock indicator comprises copying a
15 client file lock description file to a predetermined data-store.
5. The method of Claim 1 wherein recording the file lock indicator comprises creating a file
lock record according to a client file lock description file.
6. The method of Claim 1 wherein conveying the file lock indicator to an adoptive server
comprises placing a client file lock indicator in a file lock data-store on an adoptive
20 server.
7. The method of Claim 6 wherein placing a client file lock indicator in a file lock data-store
comprises copying a client file lock description file from a predetermined data-store to a
network file system status monitor directory on an adoptive server.
8. The method of Claim 6 wherein placing a client file lock indicator in a file lock data-store
25 comprises:
retrieving a file lock record;

creating a client file lock description file according to the file lock record; and
storing the client file lock description file in a network file system status monitor
directory on an adoptive server.

9. The method of Claim 1 further comprising forcing the adoptive server to recognize the
5 conveyed file lock indicator.

10. The method of Claim 9 wherein forcing the adoptive server to recognize the conveyed file
lock indicator comprises at least one of restarting a network file system, restarting a
network file system file lock manager and its associated file lock monitor and triggering a
file lock recovery sequence.

10 11. A file lock migration unit comprising:

data storage unit; and

file lock monitor comprising:

file lock receiver capable of receiving a file lock indicator from a primary
server and storing said file lock indicator in the data storage unit; and

15 file lock conveyance unit capable of conveying the file lock indicator from the
data storage unit to an adoptive server when the primary server is
unavailable.

12. The file lock migration unit of Claim 11 wherein the file lock receiver comprises:

detector capable of monitoring a file lock data-store on a primary server; and

20 retrieval unit capable of retrieving a client file lock indicator from the file lock data-
store on the primary server when a new client file lock indicator is detected in the
file lock data store on the primary server.

13. The file lock migration unit of Claim 12 wherein the detector monitors a network file
25 system status monitor directory.

14. The file lock migration unit of Claim 11 wherein the file lock receiver comprises a
retrieval unit capable of copying a client file lock description file to the data storage unit.

15. The file lock migration unit of Claim 11 wherein the file lock receiver comprises a retrieval unit capable of reading a client file lock description file and generating a file lock record according to the client file lock description file.

16. The file lock migration unit of Claim 11 wherein the file lock conveyance unit places a client file lock indicator in a file lock data-store on an adoptive server.

17. The file lock migration unit of Claim 11 wherein the file lock conveyance unit copies a client file lock description file from the data storage unit to a file lock data-store on an adoptive server.

18. The file lock migration unit of Claim 11 wherein the file lock conveyance unit generates a client file lock description file according to a file lock record retrieved from the data storage unit and places the client file lock description file in a file lock data-store on an adoptive server.

19. The file lock migration unit of Claim 11 further comprising a restart unit capable of forcing the adoptive server to recognize a conveyed file lock indicator.

20. The file lock migration unit of Claim 19 wherein the restart unit is capable of sending to the adoptive server at least one of a network file system restart command, a network file system lock management and lock status restart command and a network file system file lock recovery sequence trigger command.

21. A file lock migration system comprising:
processor capable of executing instructions; and
file migration instruction sequence, that when executed by the processor, minimally causes the processor to:
receive a file lock indicator from a primary server;
record the file lock indicator in a first predetermined data-store; and
convey the file lock indicator to a second predetermined data-store when the primary server is unavailable.

22. The file lock migration system of Claim 21 wherein the file migration instruction sequence comprises a file lock receiver instruction sequence that, when executed by the processor, minimally causes the processor to:

monitor a file lock data-store on a primary server; and

5 retrieve a client file lock indicator when a new client file lock indicator is detected in the file lock data-store on the primary server.

23. The file lock migration system of Claim 22 wherein the file lock receiver instruction sequence causes the processor to monitor a file lock data store on a primary server by minimally causing the processor to monitor a network file system status monitor
10 directory.

24. The file lock migration system of Claim 21 wherein the file migration instruction sequence causes the processor to record the file lock indicator by minimally causing the processor to:

read a client file lock description file; and

15 write the client file lock description file to a first predetermined data-store.

25. The file lock migration system of Claim 21 wherein the file migration instruction sequence causes the processor to record the file lock indicator by minimally causing the processor to:

read a client file lock description file;

20 create a client file lock record according to the client file lock description file; and

write the client file lock record to a first predetermined data-store.

26. The file lock migration system of Claim 21 wherein the file migration instruction sequence causes the processor to convey the file lock indicator to a second predetermined data-store by minimally causing the processor to place a client file lock
25 indicator in a file lock data-store on an adoptive server.

27. The file lock migration system of Claim 21 wherein the file migration instruction sequence causes the processor to convey the file lock indicator to a second predetermined

data-store by minimally causing the processor to copy a client file lock description file from the first predetermined data-store to a network file system status monitor directory.

28. The file lock migration system of Claim 21 wherein the file migration instruction sequence causes the processor to convey the file lock indicator to a second predetermined data-store by minimally causing the processor to:

retrieve a client file lock record from the first predetermined data-store;
create a client file lock description file according to the client file lock record; and
store the created client file lock description file in a network file system status monitor directory.

29. The file lock migration system of Claim 21 wherein the file migration instruction sequence further comprises a restart instruction sequence that, when executed by the processor, minimally causes the processor to force a network file system to recognize a conveyed file lock indicator.

30. The file lock migration system of Claim 21 wherein the file migration instruction sequence further comprises a restart instruction sequence that, when executed by the processor, minimally causes the processor to dispatch to a network file system process at least one of a network file system restart command, a network file system lock manager and lock status monitor restart command and a network file system file lock recovery sequence trigger command.

31. A computer-readable medium having computer-executable functions for migrating file locks from one server to another comprising:

file migration instruction sequence, that when executed by a processor, minimally causes the processor to:

receive a file lock indicator from a primary server;
record the file lock indicator in a first predetermined data-store; and
convey the file lock indicator to a second predetermined data-store when the primary server is unavailable.

32. The computer readable medium of Claim 31 wherein the file migration instruction sequence comprises a file lock receiver instruction sequence that, when executed by a processor, minimally causes the processor to:

monitor a file lock data-store on a primary server; and

5 retrieve a client file lock indicator when a new client file lock indicator is detected in the file lock data-store on the primary server.

33. The computer readable medium of Claim 32 wherein the file lock receiver instruction sequence causes a processor to monitor a file lock data store on a primary server by minimally causing the processor to monitor a network file system status monitor
10 directory.

34. The computer readable medium of Claim 31 wherein the file migration instruction sequence causes the processor to record the file lock indicator by minimally causing the processor to:

read a client file lock description file; and

15 write the client file lock description file to a first predetermined data-store.

35. The computer readable medium of Claim 31 wherein the file migration instruction sequence causes a processor to record the file lock indicator by minimally causing the processor to:

read a client file lock description file;

20 create a client file lock record according to the client file lock description file; and write the client file lock record to a first predetermined data-store.

36. The computer readable medium of Claim 31 wherein the file migration instruction sequence causes the processor to convey the file lock indicator to a second predetermined data-store by minimally causing the processor to place a client file lock indicator in a file
25 lock data-store on an adoptive server.

37. The computer readable medium of Claim 31 wherein the file migration instruction sequence causes the processor to convey the file lock indicator to a second predetermined

data-store by minimally causing the processor to copy a client file lock description file from the first predetermined data-store to a network file system status monitor directory.

38. The computer readable medium of Claim 31 wherein the file migration instruction sequence causes the processor to convey the file lock indicator to a second predetermined data-store by minimally causing the processor to:

retrieve a client file lock record from the first predetermined data-store;
create a client file lock description file according to the client file lock record; and
store the created client file lock description file in a network file system status monitor directory.

39. The computer readable medium of Claim 31 wherein the file migration instruction sequence further comprises a restart instruction sequence that, when executed by the processor, minimally causes the processor to force a network file system to recognize a conveyed file lock indicator.

40. The computer readable medium of Claim 31 wherein the file migration instruction sequence further comprises a restart instruction sequence that, when executed by the processor, minimally causes the processor to dispatch to a network file system process at least one of a network file system restart command, a network file system lock manager and lock status monitor restart command and a network file system file lock recovery sequence trigger command.

41. An apparatus for migrating file locks from one server to another comprising:
means for receiving a file lock indicator from a primary server;
means for recording the file lock indicator; and
means for conveying the file lock indicator to an adoptive server when the primary server is unavailable.

42. The apparatus of Claim 41 wherein the means for receiving a file lock indicator comprises:
means for monitoring a file lock data-store on a primary server; and

means for retrieving a client file lock indicator from the file lock data-store when a new client file lock indicator is detected in the file lock data-store.

43. The apparatus of Claim 42 wherein the means for monitoring a file lock data-store comprises a means for monitoring a network file system status monitor directory.

5 44. The apparatus of Claim 41 wherein the means for recording the file lock indicator comprises a means for copying a client file lock description file to a predetermined data-store.

45. The apparatus of Claim 41 wherein the means for recording the file lock indicator comprises a means for creating a client file lock record according to a client file lock
10 description file.

46. The apparatus of Claim 41 wherein the means for conveying the file lock indicator to an adoptive server comprises a means for placing a client file lock indicator in a file lock data store on an adoptive server.

47. The apparatus of Claim 41 wherein the means for conveying the file lock indicator to an
15 adoptive server comprises a means for copying a client file lock description file from a predetermine data-store to a network file system status monitor directory on an adoptive server.

48. The apparatus of Claim 41 wherein the means for conveying the file lock indicator to an adoptive server comprises:
20 means for retrieving a file lock record;
creating a client file lock description file; and
storing the created client file lock description file in a network file system status monitor directory on an adoptive server.